
ADVANTEST®

ADVANTEST CORPORATION

INSTRUCTION MANUAL

TR 1722

Dipole Antenna

MANUAL NUMBER 0909 EA 910

The product is a Strategic Commodity subject to
COCOM regulations.

It should not be exported without the proper
authorization from Japanese government.

ADVANTEST CORPORATION

CONTENTS

CHAPTER 1	INTRODUCTION	1
1.1	GENERAL DESCRIPTION	1
CHAPTER 2	SPECIFICATIONS	1
2.1	ELECTRICAL PERFORMANCES	1
2.2	COMPOSITION	1
2.3	DIMENSIONS AND WEIGHT	2
CHAPTER 3	HANDLING	
3.1	ASSEMBLING THE POLE BRACE	3
3.2	ASSEMBLING THE ANTENNA	4
3.3	HANDLING PRECAUTIONS	6
3.4	PACKAGING	6
CHAPTER 4	MEASURING METHODS	
4.1	WHEN USING THE TR 4132 SPECTRUM ANALYZER	7
4.2	WHEN USING A DIFFERENT SPECTRUM ANALYZER	7
4.3	MEASURING PRECAUTIONS	7

CHAPTER 1 INTRODUCTION

1.1 GENERAL DESCRIPTION

The TR 1722 dipole antenna can measure electric field strength over a frequency range of 25 MHz to 1,000 MHz in combination with the TR-4132 spectrum analyzer. (However, a different spectrum analyzer may be used.)

CHAPTER 2 SPECIFICATIONS

2.1 ELECTRICAL PERFORMANCES

(1) Frequency range

25 to 80 MHz
80 to 250 MHz
250 to 600 MHz
600 to 1000 MHz

(2) Electric field strength

When used in combination with the TR-4132 spectrum analyzer, the electric field strength can be directly read. A different spectrum analyzer may also be used depending on the reading and the compensation coefficients (see the attached sheet).

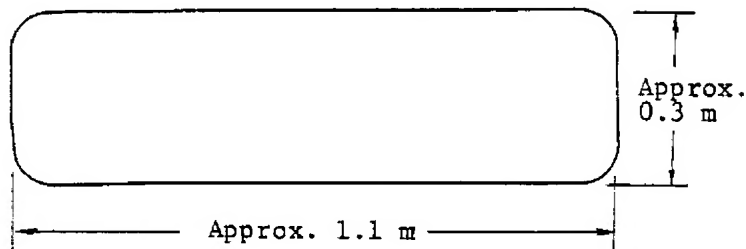
2.2 COMPOSITION

	Quantity
(1) Antenna element For 25 to 80 MHz	2
(2) Antenna element For 80 to 250 MHz	2
(3) Antenna element For 250 to 600 MHz	2
(4) Antenna element For 600 to 1,000 MHz	2
(5) Antenna holder	1
(6) Measurement cable (5D-2W Appox. 10 m)	1

(7) Upper pole brace (Fiberglass	Approx. 1 m)	3
(8) Lower pole brace (Fiberglass	Approx. 1 m)	1
(9) Direction indicator		1
(10) Wooden tripod		1
(11) Package		1
(12) Instruction manual		1

2.3 DIMENSIONS AND WEIGHT

(1) Dimensions of accomodation bag



(2) Weight

Antenna element (four sets)	Approx. 0.9 kg
Antenna holder	Approx. 0.9 kg
Pole brace (4)	Approx. 2.1 kg
Measurement cable	Approx. 1.3 kg
Tripod	Approx. 5.7 kg
Package	Approx. 1.6 kg

CHAPTER 3 HANDLING

3.1 ASSEMBLING THE POLE BRACE

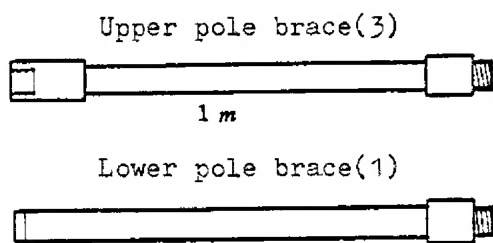


Fig. 3.1

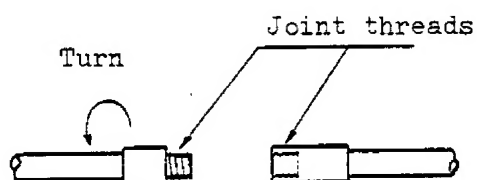


Fig. 3.2

As shown in Fig. 3.1, the pole consists of three upper pole braces and a single pole brace (made of fiberglass of approx. 1 m).

To assemble them, simply screw the pole braces together as shown in Fig.

3.2. When connecting a number of pole braces, make sure that each joint is tight. Always mount the lower pole brace on the tripod. Mount the direction indicator on the lower pole brace.

3.2 ASSEMBLING THE ANTENNA

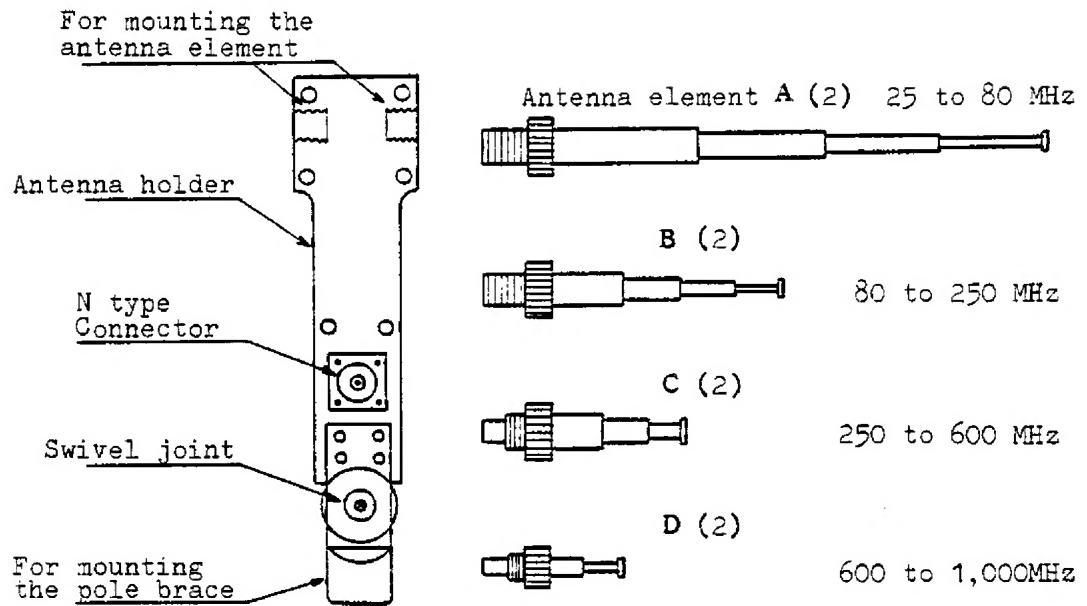
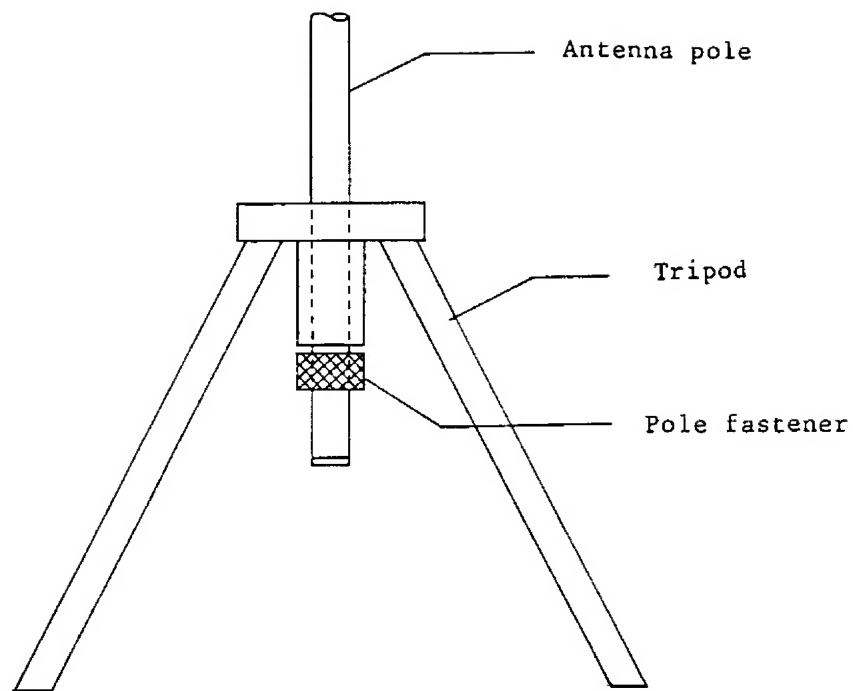


Fig. 3.3

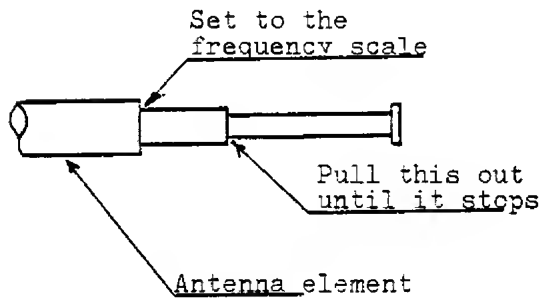


- Loosen the fastener and insert the pole to the tripod as shown above.
- Tighten the fastener to position the pole at the desired height.

As shown in Fig. 3.3, the antenna consists of one set of antenna holders and two each of the four types of antennas A, B, C, and D.

For assembly, connect the measurement cable (5D-2W approx. 10 m) to the N type connector of the antenna holder.

Select the antenna element depending on the frequency to be measured and connect the antenna element to the holder.



When extending the antenna element, start at the end and work down.

Fig. 3.4

When measuring the vertically polarized wave, assemble the antenna as shown in Fig. 3.5. Then, loosen the swivel joint, and turn it until the antenna is vertical (90 degree).

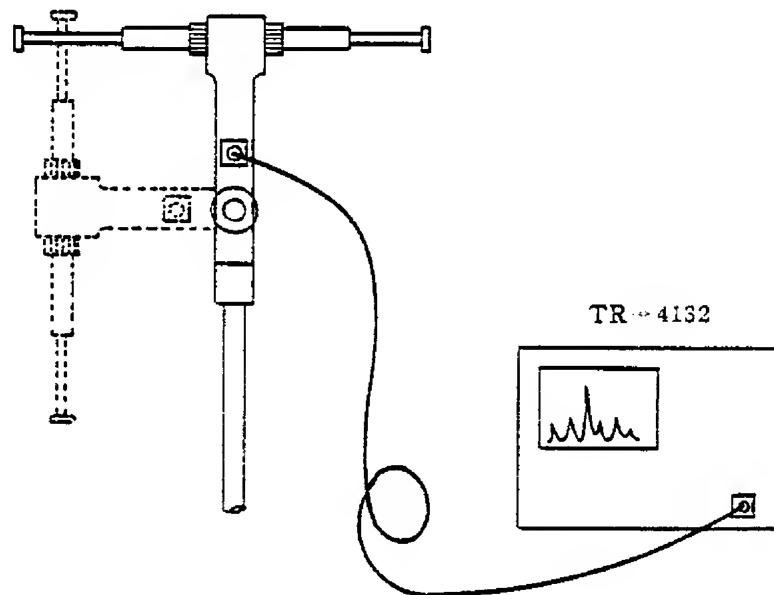


Fig. 3.5

3.3 HANDLING PRECAUTIONS

Make sure that the antenna is firmly secured so it will not be blown over in strong winds. Although the antenna can be installed by one person, two persons are recommended.

3.4 PACKAGING

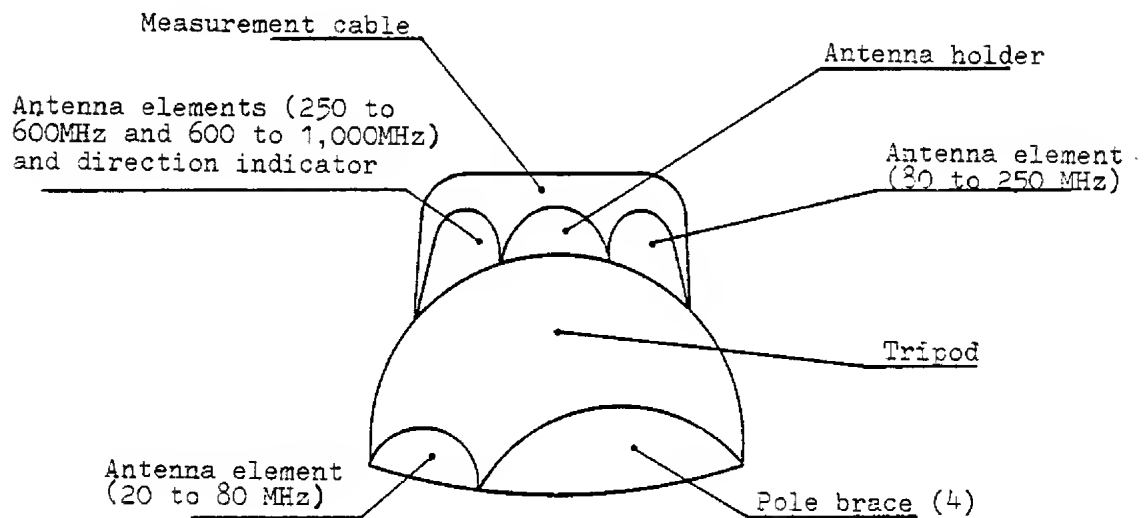


Fig. 3.6 Location of ports before unpacking

Chapter 4 MEASURING METHODS

4.1 WHEN USING THE TR 4132 SPECTRUM ANALYZER

When the FIELD STRENGTH switch is set to DIPOLE-A, the uppermost scale (REFERENCE LEVEL) on the CRT is directly displayed the electric field strength.

Since the display automatically changes as the frequency changes, the compensation coefficient is not required.

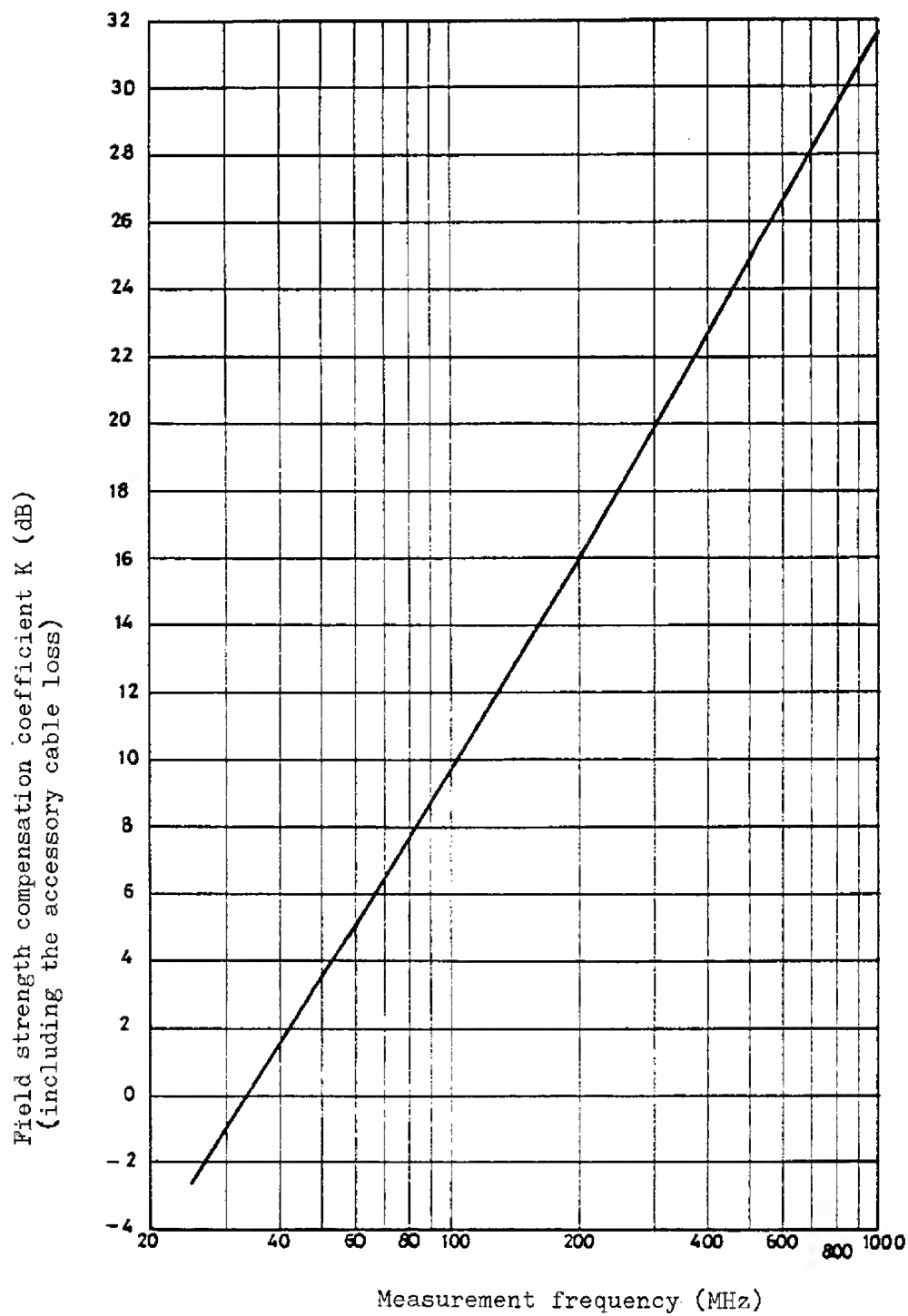
(See the TR 4132 Instruction Manual.)

4.2 WHEN USING A DIFFERENT SPECTRUM ANALYZER

The field strength (dBu per m) is obtained by adding the value measured at dBu to that of the compensation coefficients (dB in the frequency to be used) provided on the attached sheet.

4.3 MEASURING PRECAUTIONS

Since this antenna includes the cable loss in the measurement, always measure using the accessory measurement cable.



IMPORTANT INFORMATION FOR ADVANTEST SOFTWARE

PLEASE READ CAREFULLY: This is an important notice for the software defined herein. Computer programs including any additions, modifications and updates thereof, operation manuals, and related materials provided by Advantest (hereafter referred to as "SOFTWARE"), included in or used with hardware produced by Advantest (hereafter referred to as "PRODUCTS").

SOFTWARE License

All rights in and to the SOFTWARE (including, but not limited to, copyright) shall be and remain vested in Advantest. Advantest hereby grants you a license to use the SOFTWARE only on or with Advantest PRODUCTS.

Restrictions

- (1) You may not use the SOFTWARE for any purpose other than for the use of the PRODUCTS.
- (2) You may not copy, modify, or change, all or any part of, the SOFTWARE without permission from Advantest.
- (3) You may not reverse engineer, de-compile, or disassemble, all or any part of, the SOFTWARE.

Liability

Advantest shall have no liability (1) for any PRODUCT failures, which may arise out of any misuse (misuse is deemed to be use of the SOFTWARE for purposes other than it's intended use) of the SOFTWARE. (2) For any dispute between you and any third party for any reason whatsoever including, but not limited to, infringement of intellectual property rights.

LIMITED WARRANTY

1. Unless otherwise specifically agreed by Seller and Purchaser in writing, Advantest will warrant to the Purchaser that during the Warranty Period this Product (other than consumables included in the Product) will be free from defects in material and workmanship and shall conform to the specifications set forth in this Operation Manual.
2. The warranty period for the Product (the "Warranty Period") will be a period of one year commencing on the delivery date of the Product.
3. If the Product is found to be defective during the Warranty Period, Advantest will, at its option and in its sole and absolute discretion, either (a) repair the defective Product or part or component thereof or (b) replace the defective Product or part or component thereof, in either case at Advantest's sole cost and expense.
4. This limited warranty will not apply to defects or damage to the Product or any part or component thereof resulting from any of the following:
 - (a) any modifications, maintenance or repairs other than modifications, maintenance or repairs (i) performed by Advantest or (ii) specifically recommended or authorized by Advantest and performed in accordance with Advantest's instructions;
 - (b) any improper or inadequate handling, carriage or storage of the Product by the Purchaser or any third party (other than Advantest or its agents);
 - (c) use of the Product under operating conditions or environments different than those specified in the Operation Manual or recommended by Advantest, including, without limitation, (i) instances where the Product has been subjected to physical stress or electrical voltage exceeding the permissible range and (ii) instances where the corrosion of electrical circuits or other deterioration was accelerated by exposure to corrosive gases or dusty environments;
 - (d) use of the Product in connection with software, interfaces, products or parts other than software, interfaces, products or parts supplied or recommended by Advantest;
 - (e) incorporation in the Product of any parts or components (i) provided by Purchaser or (ii) provided by a third party at the request or direction of Purchaser or due to specifications or designs supplied by Purchaser (including, without limitation, any degradation in performance of such parts or components);
 - (f) Advantest's incorporation or use of any specifications or designs supplied by Purchaser;
 - (g) the occurrence of an event of force majeure, including, without limitation, fire, explosion, geological change, storm, flood, earthquake, tidal wave, lightning or act of war; or
 - (h) any negligent act or omission of the Purchaser or any third party other than Advantest.
5. **EXCEPT TO THE EXTENT EXPRESSLY PROVIDED HEREIN, ADVANTEST HEREBY EXPRESSLY DISCLAIMS, AND THE PURCHASER HEREBY WAIVES, ALL WARRANTIES, WHETHER EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, (A) ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND (B) ANY WARRANTY OR REPRESENTATION AS TO THE VALIDITY, SCOPE, EFFECTIVENESS OR USEFULNESS OF ANY TECHNOLOGY OR ANY INVENTION.**
6. **THE REMEDY SET FORTH HEREIN SHALL BE THE SOLE AND EXCLUSIVE REMEDY OF THE PURCHASER FOR BREACH OF WARRANTY WITH RESPECT TO THE PRODUCT.**
7. **ADVANTEST WILL NOT HAVE ANY LIABILITY TO THE PURCHASER FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, INCLUDING, WITHOUT LIMITATION, LOSS OF ANTICIPATED PROFITS OR REVENUES, IN ANY AND ALL CIRCUMSTANCES, EVEN IF ADVANTEST HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING, WITHOUT LIMITATION, NEGLIGENCE), STRICT LIABILITY, INDEMNITY, CONTRIBUTION OR OTHERWISE. TORT (INCLUDING, WITHOUT LIMITATION, NEGLIGENCE), STRICT LIABILITY, INDEMNITY, CONTRIBUTION OR OTHERWISE.**
8. **OTHER THAN THE REMEDY FOR THE BREACH OF WARRANTY SET FORTH HEREIN, ADVANTEST SHALL NOT BE LIABLE FOR, AND HEREBY DISCLAIMS TO THE FULLEST EXTENT PERMITTED BY LAW ANY LIABILITY FOR, DAMAGES FOR PRODUCT FAILURE OR DEFECT, WHETHER ARISING OUT OF BREACH OF CONTRACT, TORT (INCLUDING, WITHOUT LIMITATION, NEGLIGENCE), STRICT LIABILITY, INDEMNITY, CONTRIBUTION OR OTHERWISE.**

CUSTOMER SERVICE DESCRIPTION

In order to maintain safe and trouble-free operation of the Product and to prevent the incurrence of unnecessary costs and expenses, Advantest recommends a regular preventive maintenance program under its maintenance agreement.

Advantest's maintenance agreement provides the Purchaser on-site and off-site maintenance, parts, maintenance machinery, regular inspections, and telephone support and will last a maximum of ten years from the date the delivery of the Product. For specific details of the services provided under the maintenance agreement, please contact the nearest Advantest office listed at the end of this Operation Manual or Advantest's sales representatives.

Some of the components and parts of this Product have a limited operating life (such as, electrical and mechanical parts, fan motors, unit power supply, etc.). Accordingly, these components and parts will have to be replaced on a periodic basis. If the operating life of a component or part has expired and such component or part has not been replaced, there is a possibility that the Product will not perform properly. Additionally, if the operating life of a component or part has expired and continued use of such component or part damages the Product, the Product may not be repairable. Please contact the nearest Advantest office listed at the end of this Operation Manual or Advantest's sales representatives to determine the operating life of a specific component or part, as the operating life may vary depending on various factors such as operating condition and usage environment.

SALES & SUPPORT OFFICES

Advantest Korea Co., Ltd.

22BF, Kyobo KangNam Tower,
1303-22, Seocho-Dong, Seocho-Ku, Seoul #137-070, Korea
Phone: +82-2-532-7071
Fax: +82-2-532-7132

Advantest (Suzhou) Co., Ltd.

Shanghai Branch Office:
Bldg. 6D, NO.1188 Gumei Road, Shanghai, China 201102 P.R.C.
Phone: +86-21-6485-2725
Fax: +86-21-6485-2726

Shanghai Branch Office:
406/F, Ying Building, Quantum Plaza, No. 23 Zhi Chun Road,
Hai Dian District, Beijing,
China 100083
Phone: +86-10-8235-3377
Fax: +86-10-8235-6717

Advantest (Singapore) Pte. Ltd.

438A Alexandra Road, #08-03/06
Alexandra Technopark Singapore 119967
Phone: +65-6274-3100
Fax: +65-6274-4055

Advantest America, Inc.

3201 Scott Boulevard, Suite, Santa Clara, CA 95054, U.S.A
Phone: +1-408-988-7700
Fax: +1-408-987-0691

ROHDE & SCHWARZ Europe GmbH

Mühldorfstraße 15 D-81671 München, Germany
(P.O.B. 80 14 60 D-81614 München, Germany)
Phone: +49-89-4129-13711
Fax: +49-89-4129-13723

ADVANTEST®

<http://www.advantest.co.jp>

ADVANTEST CORPORATION

Shin-Marunouchi Center Building, 1-6-2 Marunouchi, Chiyoda-ku, Tokyo 100-0005, Japan
Phone: +81-3-3214-7500